

WHAT IS CLAIMED IS:

1        1. A receiver for use in a vehicle for communicating  
2        between an actuator disposed within the vehicle for controlling the  
3        operation of a vehicle feature and a remote device, the receiver  
4        comprising:

5                an antenna for receiving a wireless signal, the wireless  
6        signal generated by the remote device and including a control  
7        command;

8                a controller coupled to said antenna;  
9                wherein the controller is configured to enter a training  
10      mode of operation wherein the controller polls a plurality of wireless  
11      frequencies to detect the wireless signal, wherein the controller is  
12      configured to receive and interpret the control command on the  
13      wireless signal and to communicate the control command to the  
14      actuator for execution.

1        2. The receiver of Claim 1, wherein the receiver is  
2        configured for wireless transmission.

1        3. The receiver of Claim 1, wherein the remote device is  
2        substantially free of wiring to a vehicle control bus.

1        4. The receiver of Claim 1, wherein the antenna is a  
2        dynamically tunable antenna.

1        5. The receiver of Claim 1, wherein the actuator is a seat  
2        heater controlled by said remote device.

1        6. The receiver of Claim 1, wherein the controller is  
2        electrically coupled to the actuator via a bus.

7. The receiver of Claim 6, wherein the bus includes a multiplexed automotive instrumentation network.

1           8. The receiver of Claim 7, wherein said multiplexed  
2 automotive instrumentation network operates under the J1850  
3 standard.

1           9. The receiver of Claim 1, wherein said receiver and said  
2 remote control device communicate in the frequency range of  
3 900 MHz to 1000 MHz.

1        10. A method of controlling an actuator within a vehicle  
2        with an RF signal from a remote device, the RF signal having a  
3        control command, the method comprising:

4                polling a plurality of frequencies to locate a frequency  
5        of the RF signal;

6                receiving the control command from the remote control  
7        device via the RF signal; and

8                providing the control command to the actuator disposed  
9        within the vehicle for controlling the operation of a vehicle feature.

1        11. The method of Claim 10, wherein the control command  
2        is a vehicle seat control command.

1        12. The method of Claim 10, wherein the step of providing  
2        the control commands includes providing the control commands over  
3        a bus to the actuator.

1        13. The method of Claim 12, wherein the bus is an  
2        automotive multiplex network.

1           14. An RF control system in a vehicle comprising:  
2                   a trainable transceiver including memory, the memory  
3                   storing at least one communication protocol, and a communications  
4                   interface to a control bus in the vehicle;  
5                   an antenna electrically coupled to said trainable  
6                   transceiver;  
7                   a remote device generating an RF signal, the trainable  
8                   transceiver configured to receive the RF signal;  
9                   wherein the trainable transceiver enters a training mode  
10                  of operation wherein the receiver polls a plurality of RF frequencies  
11                  to detect the RF signal and establish communications with the  
12                  remote device, and  
13                   wherein said trainable transceiver receives a control  
14                  command from said remote device, via the RF signal, and transfers  
15                  the control command to the control bus of the vehicle to be  
16                  executed.

1           15. The RF control system of Claim 14, wherein the  
2           trainable transceiver includes transmission capabilities.

1           16. The RF control system of Claim 14, wherein the remote  
2           device is free of wiring to the control bus and mounted to the vehicle  
3           interior.

1           17. The RF control system of Claim 14, wherein the control  
2           bus is coupled to a seat heater, the control commands actuating the  
3           seat heater.

1           18. The RF control system of Claim 14, wherein the control  
2       bus of the vehicle includes a multiplexed automotive instrumentation  
3       network.

1           19. The RF control system of Claim 18, wherein the  
2       multiplexed automotive instrumentation network operates under the  
3       J1850 standard.

1           20. The RF control system of Claim 14, wherein the  
2       trainable transceiver and the remote control device communicate in  
3       the frequency range of 900 MHz to 1000 MHz.

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